

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**  
**M. TECH. (CAD/CAM)**  
**EFFECTIVE FROM ACADEMIC YEAR 2022- 23 ADMITTED BATCH**  
**R22 COURSE STRUCTURE AND SYLLABUS**

**I Year I Semester**

Course Code	Course Title	L	T	P	Credits
Professional Core - I	Advanced CAD	3	0	0	3
Professional Core - II	Additive Manufacturing	3	0	0	3
Professional Elective - I	1. Finite Element Methods & Boundary Element Methods 2. Experimental Stress Analysis 3. Green Manufacturing	3	0	0	3
Professional Elective - II	1. Automation in Manufacturing 2. Computer Aided Process Planning 3. Industrial Robotics	3	0	0	3
	Research Methodology & IPR	2	0	0	2
Lab - I	Advanced Computer Aided Design Lab	0	0	4	2
Lab - II	3D Printing Lab	0	0	4	2
Audit - I	Audit Course - I	2	0	0	0
	<b>Total</b>	<b>16</b>	<b>0</b>	<b>8</b>	<b>18</b>

**I Year II Semester**

Course Code	Course Title	L	T	P	Credits
Professional Core - III	Computer Integrated Manufacturing	3	0	0	3
Professional Core - IV	Manufacturing Systems: Simulation Modeling & Analysis	3	0	0	3
Professional Elective - III	1. Intelligent Manufacturing Systems 2. IOT & Industry 4.0 3. Optimization Techniques & Applications	3	0	0	3
Professional Elective - IV	1. Mechatronics 2. MEMS: Design and Manufacturing 3. Fuzzy Logic & Neural Networks	3	0	0	3
	Mini Project with Seminar	0	0	4	2
Lab - III	Simulation of Manufacturing Systems Lab	0	0	4	2
Lab - IV	CAM Lab	0	0	4	2
Audit - II	Audit Course - II	2	0	0	0
	<b>Total</b>	<b>14</b>	<b>0</b>	<b>12</b>	<b>18</b>

**II Year I Semester**

Course Code	Course Title	L	T	P	Credits
Professional Elective - V	1. Design for Manufacturing & Assembly 2. Composite Materials 3. Artificial Intelligence in Manufacturing	3	0	0	3
Open Elective	Open Elective	3	0	0	3
Dissertation	Dissertation Work Review - II	0	0	12	6
	<b>Total</b>	<b>6</b>	<b>0</b>	<b>12</b>	<b>12</b>

**II YEAR II SEMESTER**

<b>Course Code</b>	<b>Course Title</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Credits</b>
Dissertation	Dissertation Work Review - III	0	0	12	6
Dissertation	Dissertation Viva-Voce	0	0	28	14
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>40</b>	<b>20</b>

**Audit Course I & II:**

1. English for Research Paper Writing
2. Disaster Management
3. Sanskrit for Technical Knowledge
4. Value Education
5. Constitution of India
6. Pedagogy Studies
7. Stress Management by Yoga
8. Personality Development through Life Enlightenment Skills